 **UNIDAD EDUCATIVA MONTE TABOR – NAZARET**

**Área de Matemáticas**

**AGC**

Contenido:

Caligrafía:

Presentación:

Ortografía:

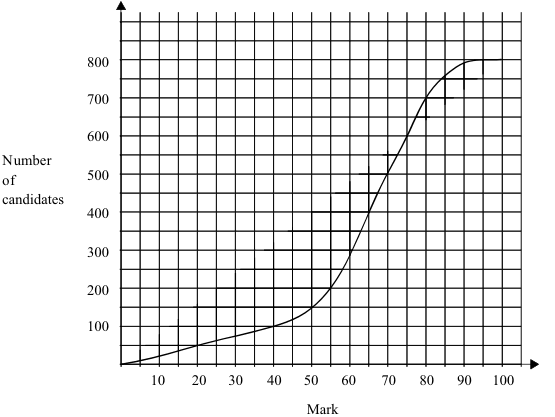
**III Parcial – II Q 2015 - 2016**

NOMBRE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CURSO: I Bachillerato

**10**

FECHA: 07/01/2016 PROFESOR/A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**EJERCICIO # 1. [6 puntos]**

A test marked out of 100 is written by 800 students. The cumulative frequency graph for the marks is given below.

(a) Write down the number of students who scored 40 marks or less on the test.

**(2)**

(b) The middle 50 % of test results lie between marks *a* and *b*, where *a* < *b*.  
Find *a* and *b*.

**(4)**

**(Total 6 marks)**

**EJERCICIO # 2. [4 puntos]**

A student measured the diameters of 80 snail shells. His results are shown in the following cumulative frequency graph. The lower quartile (LQ) is 14 mm and is marked clearly on the graph.



(a) On the graph, mark clearly in the same way and write down the value of

(i) the median;

(ii) the upper quartile.

(b) Write down the interquartile range.

**EJERCICIO # 3. [6 puntos]**

The cumulative frequency graph below shows the heights of 120 girls in a school.

(a) Using the graph

(i) write down the median;

(ii) find the interquartile range.

(b) Given that 60 of the girls are taller than *a* cm, find the value of *a*.

**(Total 6 marks)**

**EJERCICIO # 4. [9 puntos]**

A survey is carried out to find the waiting times for 100 customers at a supermarket.

|  |  |
| --- | --- |
| **waiting time (seconds)** | **number of  customers** |
| 0–30 | 5 |
| 30– 60 | 15 |
| 60– 90 | 33 |
| 90 –120 | 21 |
| 120–150 | 11 |
| 150–180 | 7 |
| 180–210 | 5 |
| 210–240 | 3 |

(a) Calculate an estimate for the mean of the waiting times, by using an appropriate approximation to represent each interval.

**(2)**

(b) Construct a cumulative frequency table for these data.

**(1)**

(c) Use the cumulative frequency table to draw, on graph paper, a cumulative frequency graph, using a scale of 1 cm per 20 seconds waiting time for the horizontal axis and 1 cm per 10 customers for the vertical axis.

**(4)**

(d) Use the cumulative frequency graph to find estimates for the median and the lower and upper quartiles.

**(3)**

**(Total 10 marks)**